

SOME NOTES ON THE *DICRURIDAE*.

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RECENTLY, when working on the *Dicruridae* in a collection of birds collected by Mr. E. G. Herbert in Siam, I found that in several cases well-differentiated geographical races were without names, whilst the nomenclature generally was in a very confused state.

Altogether I have had nearly 400 skins for examination; these including the magnificent series in the British Museum, the Tring Museum, together with one or two smaller private collections, and some skins from the Indian Museum. The following notes are the result of my work; but having considered these birds principally from the point of view of the Indian ornithologist, I have not always dealt with subspecies from some of the out-lying Islands unless the decision of certain points connected with Burmese and Indian forms made their examination necessary.

Dicrurus leucophaeus Vieill.

This species includes all those races in India and Burma which have been generally known under the names of *longicaudatus*, *nigrescens*, *cineraceus*, etc.

As regards the specific name there can, I think, be no doubt that it must be *leucophaeus* of Vieillot (*Nouv. Dict. d'Hist. Nat.*, nouv. éd., vol. ix. p. 587. 1817 [ex Levaillant, *Le Drongrî, Ois. d'Afrique*, pl. 170]).

It is true that in the letterpress Levaillant describes the habitat as Ceylon, whilst the bird next described—made from a skin of a *Dicrurus* with the under plumage of a *Coccyzus**—is said to come from Java. In the same volume Levaillant gives a very good plate of *Dicrurus coerulescens* in which the much darker upper parts are correctly given, and this would lead one to suppose that the light plumage of *leucophaeus* is also correctly depicted. If this is so, then *leucophaeus* cannot be meant for any form of Drongo from Ceylon, but it is, on the other hand, an excellent representation of the Javanese Grey Drongo, showing the short tail so typical of this race though the fork is exaggerated in depth.

Levaillant's localities are notoriously untrustworthy, and in this instance he seems to have given the habitat of his fictitious bird as Java and then transferred the real Javan bird to Ceylon.

Java must therefore be held to be the type locality for this bird, which will stand as *D. leucophaeus leucophaeus* and the remaining geographical races as subspecies.

To define the different forms is a matter of no little difficulty, for the keys hitherto given are far from satisfactory and the characters referred to thereon are not constant. Moreover the greater the amount of material available for examination the less do the hitherto alleged differences hold good.

A yet further complication arises in the fact that in the eastern portion of its range, *i.e.* east and south of the Brahmapootra, a dark and light phase are found as far south, at all events, as the Malay Peninsula. Even in India, west

* Tweeddale, *Ibis*, 1878. p. 75.

of this river, there is a great difference in depth of colour between the darkest and palest individuals from one and the same locality. Thus from Arrakan, Chin Hills, Shan States, Lower Burma, and Tennasserim both dark and light birds may be, and in many instances have been, obtained in the same locality on the same date, whilst other specimens, intermediate in colour, have also been obtained which could be assigned to either with equal accuracy. Even from the extreme north-west of India and Simla, whence most specimens are very level in tint, very dark and very pale birds may be met with, and there are examples of both extremes in the big Simla series in the British Museum.

At the same time colour cannot be entirely eliminated from classification of these birds, for it is very evident that—

(1) On the whole birds west of the Brahmapootra are decidedly darker than those on the east, though there are *individuals* found in the latter practically as dark as any on the west.

(2) A steady decrease in depth of colour is found as one works south, though this tendency to paleness is more accentuated in southern Burmese than in southern Indian birds.

As regards the formation and length of tail, these features are of little assistance in discriminating between the different geographical races of *D. leucophaeus*, although there is no doubt that birds from the extreme south-east have typically shorter, less forked tails than those from the north and west.

We are therefore thrown mainly on characters other than those of colour to enable the geographical races to be worked out, and it would appear that size, combined with some consideration of comparative length in wing and tail and average depth of colour, will allow of this being done with a sufficient degree of accuracy.

To show this at a glance I give the following measurements of birds from various areas, giving maximum and minimum as well as average figures.

EAST OF THE BRAHMAPOOTRA.

	Birds.	Wings average.	Tails average.
<i>Assam and E. Bengal</i>	45	146 mm. (130-148)	148 mm. (130-167).
<i>Yunnan</i>	24	145 mm. (140-153)	153 mm. (132-167).
<i>Upper Chin Hills</i>	25	140 mm. (130-144)	146 mm. (135-156).
<i>S. Shan States</i>	21	134 mm. (132-143)	140 mm. (134-154).
<i>Central Burma</i>	46	131 mm. (123-139)	134 mm. (124-150).
<i>Lower Burma</i>	24	131 mm. (130-146)	140 mm. (124-155).
<i>Malay Peninsula</i>	18	127 mm. (120-136)	131 mm. (122-151).
<i>Java</i>	18	127 mm. (120-133)	123 mm. (118-131).

WEST OF THE BRAHMAPOOTRA.

<i>N.E. India</i>	64	140.6 mm. (127-148)	152 mm. (129-175).
<i>N. Central India</i>	36	141.0 mm. (130-152)	152 mm. (128-170).
<i>N.W. India</i>	38	135.8 mm. (127-145)	152 mm. (130-170).
<i>Central India</i>	15	135.3 mm. (127-145)	141 mm. (129-154).
<i>South India</i>	46	132.6 mm. (124-145)	147 mm. (127-170).
<i>Ceylon</i>	13	131.6 mm. (126-135)	139 mm. (133-147).
<i>Total</i>	<u>433</u>		

From the above measurements it is self-evident that as we work from north to south we get a steady diminution in size. In India I cannot find that

there is any corresponding variation in colour, but in Burma, as I have already said, although dark and light birds are to be found throughout, from north to almost the extreme south, both forms do grow lighter towards the south, whilst in Java there are apparently only very pale, blue-grey birds.

However we divide this species into geographical races, our divisions cannot but be rather arbitrary, but it appears to me that the races inhabiting the following areas can be separated with sufficient ease to make them acceptable as subspecies. At the same time, more especially in India, it must be remembered that the extremes overlap greatly and that individual variation is exceptionally great in species of this family.

(1) *Dicrurus leucophaeus leucophaeus*.

Dicrurus leucophaeus Vieillot, *Nouv. Dict. d'Hist. Nat.*, nouv. éd. ix. p. 587. 1817. ex Levaillant, *Le Drongré, Ois. d'Afrique*, pl. 170.

Type Locality : Java.

A small bird of a very pale coloration, with a very blue-grey tint. The tail is generally conspicuously shorter than the wing, a proportion found only in this Javan form. Also found on Bali by Doherty and Stresemann (Tring Museum).

Wing average, 127 mm.; tail, 123 mm.

(2) *Dicrurus leucophaeus wallacei*.

Buchanga wallacei Walden, *Ann. & Mag. Nat. Hist.* (4) v. p. 220 (1870).

Type Locality : Lombok.

A small bird but darker than *leucophaeus* and with a comparatively longer tail. I have not seen a sufficient number of these birds or of the next form to be able to give average measurements.

(3) *Dicrurus leucophaeus palawanensis*.

Buchanga palawanensis Whitehead, *Ibis*, 1890. p. 47.

Type Locality : Palawan.

A very small bird with wing and tail about equal in length and under 120 mm. This is the smallest of all the geographical races of *leucophaeus* and distinguishable by size alone.

(4) *Dicrurus leucophaeus disturbans*, subsp. nov.

Type : ♂, No. 86.3.1.2044; ♀, No. 86.3.1.2040. British Museum.

Type Locality : Amherst.

This bird is just about the same in size as the Javan form, but is distinctly darker and has a proportionately longer tail.

Habitat. It is found in the Malay Peninsula as far north as Bangkok and extends east into Siam, though how far is at present unknown. Where *disturbans* meets true *leucophaeus* in the south it is impossible to say, but birds from Johore and Singapore are undoubtedly true *leucophaeus*.

I have been unable to find any name which applies to this bird, Blyth's *intermedius* referring to the bird from the extreme south and not to this form.

Wing average, 127 mm.; tail, 131 mm.

(5) *Dicrurus leucophaeus nigrescens*.

Dicrurus nigrescens Oates, in Hume's *Nests and Eggs*, 2nd Ed. i. p. 208. 1889 (Descr. of eggs); id. *Faun. Brit. Ind.*, B. 1. p. 315 (1889—Descr. of plumage).

Type Locality: Rangoon.

Oates has not designated a type for this name, but the birds so named and marked in his handwriting are now in the British Museum and these are from Rangoon.

This name is given by Oates to the very dark form which occurs over the whole of central Burma, and which he undoubtedly considered to be quite a different species to the pale. I have, however, shown that they are one and the same, and his name having priority will therefore have to be retained. In the *Avifauna of British India* (vol. i. p. 315) Oates gives the range of his bird as from Rangoon and Pegu to the extreme south of Tennasserim, but as a matter of fact the Rangoon bird is identical with the Central Burmese birds and not with the South Tennasserim birds. Again, Oates' key, which infers that the southern bird is a "deep indigo" whilst northern birds are bluish grey, is quite incorrect, for, on the whole, it is the reverse to this which is actually the case.

Habitat. The area occupied by *D. l. nigrescens* may be said to be from about the latitude of Bangkok as far north as S. Yunnan, Central Chin Hills, and Shan States, where it grades into the next and bigger form.

Wing average, 132 mm.; tail average, 138 mm.

(6) *Dicrurus leucophaeus hopwoodi* subsp. nov.

Type: No. 86.3.1.2012. British Museum.

Type Locality: Dacca.

A bigger bird, considerably, than *nigrescens*, with a very long tail and in colour distinctly darker on an average.

This is the biggest of all the forms of Grey Drongo, distinguishable at a glance, from all others east of the Brahmapootra and decidedly bigger than even the biggest on the west of that river, from which they also differ in being paler on an average.

The birds from the Chin Hills seem to be intermediate between *nigrescens* and *hopwoodi*, those from the south belonging to the former, those from the north to the latter; unfortunately in most cases exact localities from these hills have not been given, and it is difficult therefore to determine the connecting line with any certainty.

Habitat. Assam and Bengal east of the Brahmapootra, Manipur, Looshai, Chittagong Hill Tracts, extreme northern Chin Hills, Northern Kachin Hills, and Shan States into Yunnan.

Omitting doubtful specimens from the Chin Hills which cannot with certainty be located either in the north or south, the measurements are:

Wing average, 145.7 mm.; tail average, 150.0 mm.

Including the above doubtful birds:

Wing average, 144.2 mm.; tail average, 148.7 mm.

I name this bird after Mr. Cyril Hopwood, who has done much useful ornithological work in the area it inhabits.

(7) *Dicrurus leucophaeus stevensi*, subsp. nov.

Type: ♀ 25. iv. 1900, Darjeeling, India, C. T. Bingham Coll., Tring Museum.

Type Locality: Darjeeling.

The largest form found to the west of the Brahmapootra, and though not as large as *D. l. hopwoodi* it has an even longer tail than that bird. It is also a decidedly darker bird than any of the more eastern forms with less variation in depth of colour.

Between this and Southern Indian forms it is not easy to distinguish any variation in colour, but in size they decrease steadily as they get farther and farther south.

Habitat. It is extremely hard to lay down any arbitrary line dividing the ranges of the various subspecies east of the Brahmapootra. With all continental subspecies there might be expected an area into which the adjoining subspecies grade, but with this species there is so steady, if small, a decrease in size from the extreme north to the extreme south of India that the task is rendered unusually difficult.

The size of the north-eastern birds and those from North-Central India suffice, I think, to keep these distinct from the rest, and I include in the area of *D. l. stevensi* all birds from West Central Nepal, Bhutan, Sikkim, the hills of Assam north and west of the Brahmapootra and the foothills running along their entire length.

Wing average, 140.9 mm. (127–152); tail average, 152 mm. (128–175).

I have had to give this form a new name as I can find none which apply to it. Hodgson's name *pyrrhops* is a *nomen nudum*, Beavan's name *waldeni* was given to a Simla bird to the west of the range occupied by *stevensi*. Gray's *cinerascens* is, of course, merely a misprint for Horsfield's *cineraceus* which = *leucophaeus*.

I name this bird in honour of Mr. H. Stevens, whose collections of Assam and Nepalese birds are mostly in the Tring Museum.

(8) *Dicrurus leucophaeus longicaudatus*.

Dicrurus longicaudatus A. Hay, Jerdon, *Madr. Jour. L. S.* xiii. pt. ii. p. 121 (1845).

Type Locality: Neilgherries.

A smaller bird than *stevensi*, but otherwise indistinguishable.

Habitat. I include for the present under this name the whole of the birds found in Continental India south of the area occupied by *D. l. stevensi* as well as those found in the N.W. Himalayas west of Nepal.

Birds from Central India average as big as those from N.W. India, but have a shorter tail of only 141 mm. as against 152 mm. As, however, I have only been able to examine a comparatively small series of the former and birds from South India have an average of 147 mm. for tail measurements, I cannot consider this feature as of any real importance. Birds from South India are smaller again than those from Central India, but the differences are so small that I do not feel justified in dividing them on this account alone.

Wing average, 134.1 mm. (124–145); tail average, 148.1 mm. (127–170).

(9) *Dicrurus leucophaeus minimus* subsp. nov.

Type: ♂ 23. xii. 1874, W. V. Legge coll., Tring Museum.

Type Locality: Ceylon.

This is the smallest of the western forms, though much larger than the corresponding form from Java. It appears to be also rather a darker bird than those from Southern India, but the difference is so slight as to be negligible. The tail is much shorter on an average than the more northern birds, and this seems to be consistent, for the longest tail I have measured is only 147 mm.

Wing average, 131.6 mm. (120–135); tail average, 139 mm. (133–147).

Stephens's name *ceylonensis* (in Shaw's *Gen. Zool.* xiii. 2, p. 140, 1826) is only another name for Levaillant's "Drongri" and therefore a synonym of *leucophaeus* and *cineraceus*. There is no other name that I can find applicable to the form, and I have therefore been compelled to give it a new name.

Dicrurus ater.

Throughout the whole of India and Ceylon, Burma, the Malay Peninsula, Java, Cochin China, Siam, Gambodia, and China I can find no variation in colour to assist in the division of this species into geographical subspecies, with the sole possible exception of the rictal white spot which may or may not be present. When making my first examination I was in hopes that the depth of colour of the undersurface of the wing quills might prove a character of some use, but this proves to be merely individual.

The depth of the fork to the tail has sometimes been referred to as a distinguishing feature, but this again seems to vary over every portion of this Drongo's range in almost equal degree, though birds to the west of the Brahmapootra certainly have longer and more deeply forked tails on an average than have those to the east of this river.

As regards the rictal white spot, this does not help us much. Roughly speaking, it may be said to be always present in birds from the North-West, Central, and Southern India and in all Central and South Burmese ones as well as in Malay specimens. In birds from Siam, Cochin China, and China it is generally absent, whilst of those from N.E. India, Assam, Northern Burma, and Formosa about half have the spot and half have not. From Java there are practically no specimens with any sign of a spot.

We are driven therefore to size as the main means for differentiating between the various races, but, as with other genera and species of the *Dicruridae*, comparative proportions of wing, tail, and bill must not be overlooked.

The figures given below show the average measurements of specimens from every portion of the Black Drongos' habitat together with maxima and minima for wings and tails.

N.W. India: 13 birds. Rictal spot present in all but one.

Wing average, 149.4 mm. (140–155); tail average, 166.4 mm. (154–184); bill about 22.5 mm.

N.E. India and Assam: 38 birds. Rictal spot present in 20, absent in 18.

Wing average, 148.8 mm. (141–155); tail average, 158.0 mm. (140–178); bill about 24.0 mm.

Central India : 30 birds. Rietal spot present in all but one.

Wing average, 141·7 mm. (128–156) ; tail average, 151·7 mm. (142–168) ;
bill about 22·5 mm.

South India : 24 birds. Rietal spot present in all but 3 from Travancore.

Wing average, 140·3 mm. (129–144) ; tail average, 155·5 mm. (143–167) ;
bill about 23·0 mm.

Ceylon : 8 birds. Rietal spot present in all.

Wing average, 133·0 mm. (125–143) ; tail average, 153·3 mm. (135–165) ;
bill about 20·0 mm.

Burma : 36 birds. Rietal spot present in all but 2.

Wing average, 143·9 mm. (134–151) ; tail average, 145·0 mm. (125–165) ;
bill about 22·0 mm.

China : 32 birds. Rietal spot present in 6, absent in 26.

Wing average, 142·8 mm. (130–155) ; tail average, 149·2 mm. (130–165) ;
bill about 22·0 mm.

Hainan : 13 birds. Rietal spot absent in all but 2.

Wing average, 142·4 mm. (130–152) ; tail average, 145·3 (128–160) ; bill
about 21·8 mm.

Siam : 5 birds. Rietal spot present in all.

Wing average, 140·5 mm. (139–142) ; tail average, 146·0 mm. (143–150) ;
bill about 20·0 mm.

Formosa : 20 birds. Rietal spot present in 8, absent in 12.

Wing average, 148·2 mm. (139–155) ; tail average, 145·5 mm. (131–152) ;
bill about 23·5 mm.

Java : 12 birds. Rietal spot just visible in one bird, absent in the rest.

Wing average, 129·0 mm. (121–136) ; tail average, 146·4 mm. (130–165) ;
bill about 21·0 mm.

The above shows that *Dicrurus ater* seems to fall into 6 fairly satisfactory groups, though there are some debatable points with which I deal under the headings of the various races.

The oldest name for the species is *Muscicapa atra* of Hermann, which therefore stands as the specific name for the various forms.

(1) *Dicrurus ater ater*.

Muscicapa atra Hermann, *Obs. Zool.* p. 208 (1804), Tranquebaria.

Dicrurus macrocercus Vieillot, *Nouv. Dict. d'Hist. Nat.* ix. p. 588 (1817).

Muscicapa biloba Licht., *Verz.* p. 52, Ind. Orient.

Dicrurus indicus Steph., *Shaw's Gen. Zool.* xiii. p. 139, India.

Dicrurus baticasius Sykes, *P.Z.S.* 1832. p. 86 (nec Linn.) Dekkan (corr. Africa).

Type Locality : Tranquebaria.

A medium-sized bird with a proportionately long tail and largish bill.

This form is undoubtedly very close to the Burmese bird, but is on the average smaller and yet has a tail which is 6 mm. longer than it is in that bird ;

it appears therefore better to keep them separate, especially when it is seen that geographically they are divided by an area inhabited by a race well differentiated from either (*albirictus*).

Habitat. This bird inhabits the whole of India south of the foothills and adjacent plains of the Himalayas to the extreme south of Travancore, whence there are some specimens equal in size to the largest of Central Indian birds.

Wing average, 140.4; tail average, 153.6; bill about 22.5 mm.

(2) *Dicrurus ater albirictus*.

Buchanga albirictus Hodgs., *Ind. Rev.* i. p. 326 (1837) Nepal.

Edolius fmgah Blyth, *J.A.S.B.* xv. p. 800.

Dicrurus himalayensis Tytler, *Ibis*, 1868. p. 200. Simla to Mussoori (nom. nud.).

Type locality: Nepal.

The largest of all the races of this Drongo with a very long tail and a heavy bill. Birds from the west appear to have longer tails than those in the east, but as a very few short-tailed birds suffice to reduce the average and we have but 13 birds to deal with, it is not possible to separate them on this characteristic, even accompanied as it is by a somewhat smaller bill.

Habitat. This race is found from the west of the Himalayas, through Garhwal, Nepal, Sikkim, Bhutan, the hills north and south of the Brahmapootra into Manipur and the Northern China Hills. Birds from Chittagong and Eastern Bengal also belong to this form, but not those from Calcutta and Behar, which belong to the last.

Wing average, 149.1 (140-155); tail average, 159.5 (140-184); bill about 23.5 mm.

(3) *Dicrurus ater minor*.

Dicrurus minor Layard, *Ann. & Mag. Nat. Hist.* 2. xiii. p. 129 (1854).

Type Locality: Ceylon.

A very small bird but with a very long tail, like all the western forms. The Ceylon bird has a decidedly smaller bill than the northern forms nearest to it.

Habitat. Ceylon.

Wing average, 133.0 mm. (125-143); tail average, 153.3 mm. (135-165); bill about 20 mm.

(4) *Dicrurus ater cathoecus*.

Dicrurus cathoecus Swinhoe, *P.Z.S.* 1871. p. 377.

Type Locality: China.

This form is very close to the Central Indian one, typical *ater*, but it is a rather larger bird with a decidedly shorter tail and must be kept separate. I cannot, however, divide the birds from Burma, China, and Hainan from one another. It has been alleged that the Chinese birds can be distinguished by their larger bills and shorter wings, but with fine series of both Chinese and Burmese birds and over a dozen from Hainan available for comparison I cannot find that the supposed differences hold good.

As regards Siam birds the relationship is not so definite, and it would appear that birds from the extreme south (Siam in Malay Peninsula and ? north

and east to Bangkok) are very small with small bills like the Javan birds, and possibly may have to be linked with that form. At present material from South Siam and the Malay Peninsula is very meagre, and with birds which individually vary so enormously it is not safe to diagnose forms except on really good series.

Habitat. Kloss in a recent article in the *Ibis* has referred two or three Siam birds to *Dicrurus longus* and he may well prove to be right. At present I include under the name *cathoccus* birds from the whole of Burma south of the most northern Chin, Kachin, and Shan Hills, the whole of Southern China, Cochin China, Northern Siam certainly as far south as Bangkok, or Hainan.

Wing average, 142.9 mm. (130–155); tail average, 147.4 (125–165); bill about 21.9 mm.

(5) *Dicrurus ater longus*.

Dicrurus longus Bonap., *Consp. Gen. Av. i.* p. 352 (1850).

Type Locality: Java.

The smallest of all the forms of Black Drongo, but with a tail longer in proportion than any other eastern form and also a smaller bill.

Habitat. The area inhabited by this form may have to be extended considerably if it is found impossible to divide from it the birds from the extreme south and east of the Malay Peninsula. At the same time more material from these parts may show that they are identical with those from the rest of Burma. Three birds from Amherst have wings averaging 143.0 mm. equal to the average of *cathoccus* and two from Mergui have an average of 144.0 mm.

Wing average, 129 mm. (121–136); tail average, 146.4 mm. (130–165); bill about 21 mm.

(6) *Dicrurus ater harterti*, subsp. nov.

Type: ♂ Tai-peh, Formosa. 6. iv. 1896. Owston Coll., Tring Museum.

Type Locality: Formosa.

With the exception of the Himalayan bird this form is the biggest of all, but is separable at a glance by its curiously short tail; indeed this is the only subspecies of *D. a. ater* of which the tail averages less than the wing. The bill is stout and quite as long as that of the big northern bird.

Habitat. Formosa.

Wing average, 147.7 mm. (139–155); tail average, 140.0 (131–152); bill about 23.5.

Dissemurus paradiseus.

Dissemurus paradiseus has been split up into many geographical races, for its range of variation is undoubtedly very great. In addition to size, in this species the comparative length between wing and tail, the size of the racquets, and the size of the crest all form excellent characters for discriminating between the various forms.

As with so many other species of Drongo the subspecies inhabiting Central Burma and that inhabiting Central India approach very closely, as do those from farther south, *i.e.* Ceylon and Southern India in the west and the Malay Peninsula, Java, and Sumatra in the east. With this species, however, there

is always some combination of characters present enabling one to differentiate between them. The tails vary so much in length and in so many specimens they are more or less imperfect that this member taken on average measurements does not afford much help; on the other hand the maximum measurements attained by perfect specimens do seem to form a good characteristic. The same remarks apply to the bill.

As regards size alone the following measurements give some idea of the natural groups into which the geographical races fall, but, as already stated, in some cases birds of similar dimensions vary greatly in other respects.

	Birds.	Wing average.	Tail up to	Bill.
(1) Assam and N. E. India	44	168 mm.	560 mm.	32-35 mm.
(2) Andamans	30	162 mm.	450 mm.	29-34 mm.
(3) Central Burma, etc.	52	160 mm.	435 mm.	28-32 mm.
(4) Hainan	4	154 mm.	420 mm.	26-29 mm.
(5) Central and S. India	28	152 mm.	415 mm.	26-29 mm.
(6) Siam and N. Malay Pen- insula	59	151 mm.	420 mm.	27-30 mm.
(7) Nicobars	4	149 mm.	425 mm.	27-29 mm.
(8) Ceylon	21	146 mm.	340 mm.	27-28 mm.
(9) S. Malay to Java	90	140 mm.	380 mm.	24-28 mm.
(10) Borneo	30	135 mm.	300 mm.	24-25 mm.

The differences which exist in addition to size are dealt with under each individual subspecies.

(1) *Dissemurus paradiseus paradiseus*.

Cuculus paradiseus Linn., *Sys. Nat.* ed. xii. i. p. 172 (ex Brisson). 1766, Siam.

Dicrurus platurus Vieill., *Nouv. Dict. d'Hist. Nat.*, nouv. éd., ix. p. 588, Malabar and Siam.

Edolius cristellatus Blyth, *J.A.S.B.* xi. p. 171. 1842. Tennasserim.

Type Locality: Siam.

The typical form of *paradiseus* is a medium-sized bird with a rather small crest the feathers of which curl back only over the forehead and extreme anterior crown. The tail is well developed, with the raquets long and large. The bill is medium.

I cannot divide the birds from Central Siam from those of the extreme south of Siam and Tennasserim, but from this point southwards the birds are smaller and the crest almost non-existent.

The birds in the west of the Malay Peninsula, if we can judge from a large series from Tavoy and Mergui, are larger than those on the east, and may possibly eventually have to be linked with *rangoonensis*, but the crests are no larger than in the Siam bird.

	Birds.	Wing average.	Tail up to
East.	21	148 mm. (138-159)	410 mm.
West	38	153 mm. (143-163)	420 mm.

(2) *Dissemurus paradiseus setifer*.

Edolius setifer Cab., *Mus. Hein. Th.* 1. p. 111. 1850.

Type Locality: Java and Sumatra.

This form is slightly smaller than *paradiseus*, with a comparatively still shorter tail, but differs principally in having practically no crest.

From the figures given below it will be seen that the specimens from Java and Singapore average larger than those in the intervening island of Sumatra and the more northern mainland of Malacca. This is very interesting and shows how extremely careful one must be not to make subspecies on size alone.

	Birds.	Wing average.	Tail up to	Bill.
Malacca	28	138 mm. (126-149)	365 mm.	24-29 mm.
Johore	30	145 mm. (136-152)	380 mm.	26-29 mm.
Singapore Island	7	143 mm. (140-150)	375 mm.	27-28 mm.
Sumatra	20	137 mm. (126-148)	375 mm.	25-29 mm.
Java	5	143 mm. (133-150)	370 mm.	24-28 mm.

It is of course impossible that we should have subspecies in alternating areas like this, and they must therefore all be included under one name, and, doubtless, if we had long enough series the averages would all come down to practically the same.

Habitat. Malacca to the extreme south of the Malay Peninsula, Singapore Island, Sumatra, and Java.

Wing average, 140 mm. (126-153); tail, up to 380 mm.; bill, 24-29 mm. (90 birds).

(3) *Dissemurus paradiseus brachyphorus.*

Edolius brachyphorus Bp., *Consp. Gen. Av.* i. p. 351 (1850).

Type Locality: Borneo.

This is the smallest of all the geographical races of *D. paradiseus*, has no crest whatsoever, and has a very short tail, the racquets on the outermost feathers being conspicuously smaller and more narrow than in any other race.

Habitat confined to Borneo.

Wing average, 135 mm. (129-149); tail, up to 300 mm.; bill, 24-28 mm. (30 birds).

(4) *Dissemurus paradiseus johni.*

Hartert, *Nor. Zool.* ix. p. 580. 1902.

Type Locality: Hainan.

This bird is very similar to the large, full-crested form *grandis*, from N.E. India and Northern Burma, but is separable from it at once by the crest which is softer and fuller and less hairy. It also differs in being slightly smaller, with a much shorter tail.

Habitat confined to Hainan.

Wing average, 154 mm. (143-169); tail, up to 420 mm.; bill, 26-29 mm. (4 birds).

(5) *Dissemurus paradiseus rangoonensis.*

Edolius rangoonensis Gould, *P.Z.S.* 1836. p. 5.

Type Locality: Rangoon.

This is a slightly larger bird than *paradiseus*, with a decidedly fuller, longer crest which often curls back well over the centre of the crown. The bill is slightly larger, the tail well developed, with racquets which sometimes exceed 76 mm. in length. From *grandis* it differs in being smaller and in having a

smaller crest and bill with a less-developed tail. Although exactly intermediate between these two forms and, of course, grading into them on the boundaries of its habitat, it yet ranges over a larger area than either and is certainly entitled to a geographical or subspecific name.

Habitat. Central and South-Central Burma, South Chin Hills, South Shan States, and Northern Siam.

Wing average, 160 mm. (147-170); tail, up to 435 mm.; bill, 28-32 mm. (52 birds).

(6) *Dissemurus paradiseus grandis*.

Edolius grandis Gould, *P.Z.S.* 1836. p. 5.

Chibia malabaroides Hodg., *Ind. Rev.* i. p. 325. 1837. Nepal.

Edolius dentiostriis A. Hay, apud Jerdon, *Madr. Jour.* x. p. 121, Orissa.

Type Locality: Assam.

The Assam bird is a very large form with a magnificent crest, frequently so long that it falls over the whole crown; the racquet tail feathers are very long, with racquets sometimes over 88 mm. long; the bill is big and powerful.

Habitat. *D. p. grandis* is found over the whole of N.E. India, extending as far south and west as Mussoorie, Sambalpur, Baipur, and the northern reaches of the Godaverī River. East it extends through Assam, north and south of the Brahmapootra River, Northern Chin Hills, Northern Shan States, and Yunnan.

Wing average, 168 mm. (155-182); tail, up to 560 mm.; bill, 32-35 mm. (44 birds).

(7) *Dissemurus paradiseus otiosus*.

Dissemurus malabaricus otiosus Richmond, *Proc. U.S. Nat. Mus.* xxv. p. 291 (1902).

Edolius affinis Beavan, *Ibis*, 1867. p. 323 (ex Tytler M.S.), Andamans.

Type Locality: Andamans.

A large bird with no crest, a long powerful bill, and a long tail with broad racquets about 70 mm. in length.

Habitat. Confined to the Andamans.

Wing average, 162 mm. (152-167); tail, up to 450 mm.; bill, 29-34 mm. averaging over 32 mm. (30 birds).

Beavan's name *affinis* is, as shown by Richmond, preoccupied by *Edolius affinis* of Blyth (*J.A.S.B.* xi. p. 174. 1842).

(8) *Dissemurus paradiseus nicobariensis* subsp. nov.

Type Locality: Nicobars.

Types ♂ ♀ Kondel, Nicobars, 14.iii.73; Hume Coll. British Mus. (W. Davison). This bird differs strikingly from *otiosus* in its much smaller bill, which averages only about 28 mm. It is also a smaller bird with less-developed racquets, these only running up to 54 mm. in length as well as being narrower than they are in *otiosus*.

Habitat. Confined to the Nicobars.

Wing average, 149 mm.; (146-153); tail, up to 425 mm.; bill, 27-29 mm. (4 birds).

(9) *Dissemurus paradiseus malabaricus*.

Lanius malabaricus Lath., *Ind. Orn.* i. p. 66. 1790, Malabar.

Malabaricus is a smaller bird than *grandis*, with comparatively a still shorter tail, smaller bill, and much smaller crest.

Habitat. The whole of India south of the habitat above defined for *grandis*. It is not easy, of course, to exactly define the range of this bird in the north, as where *grandis* and *malabaricus* meet the two subspecies intergrade and intermediate specimens are met with which may be assigned to either. Birds from the Central Provinces and Orissa seem invariably to belong to the northern race, having very full crests and an average wing measurement of over 165 mm. In the west the two forms seem to meet about Khandesh or a little north of that district, the birds from that part of India having rather small crests, but wings averaging over 160 mm.

Wing average, 152 mm. (142-167); tail, up to 415 mm.; bill, 26-29 mm. (28 birds).

(10) *Dissemurus paradiseus ceylonensis*.

Dissemurus ceylonensis Sharpe, *Cat. Birds B.M.* iii. p. 264 (1877), Ceylon.

A very small bird with a very small crest and a comparatively shorter tail. It differs from the Javan bird in being larger and in having a small crest, whilst from typical *paradisus* it differs in being a good deal smaller.

Habitat. The island of Ceylon only.

Wing average, 146 mm. (139-156); tail, up to 340 mm.; bill, 27-28 mm. (21 birds).

Only one specimen in the British Museum series has a wing over 150 mm.

***Chaptia aenea*.**

This little Drongo does not appear to vary in colour throughout the whole of the area in which it is found, such variations as have hitherto been alleged to constitute differences between geographical races being merely individual. The principal of these are first the colour of the gloss, which ranges through greenish blue, purple-blue, and purplish, secondly the amount of grey visible on the rump, and thirdly the depth and purity of the black of the lower plumage. Failing therefore colour variation, we are thrown entirely upon measurements as a means for differentiating between the various geographical subspecies.

I have been able to examine 149 specimens of *Chaptia* in the British Museum and 62 in the Tring Museum, giving the following results:—

	Birds.	Wing average.	Tail.
<i>Northern India</i>	42	123·4 mm. (118-132)	120·6 mm. (109-128).
<i>Assam</i>	42	122·4 mm. (115-129)	118·9 mm. (108-130).
<i>Chin and Shan Hills</i> . . .	8	124·2 mm. (123-126)	118·1 mm. (104-122).
<i>Hainan</i>	20	122·8 mm. (117-130)	118·0 mm. (105-124).
<i>South India</i>	23	117·0 mm. (107-122)	116·0 mm. (102-120).
<i>Burma</i>	33	118·5 mm. (111-124)	112·0 mm. (97-116).
<i>Malay Peninsula</i>	8	118·0 mm. (114-123)	112·0 mm. (107-116).
<i>Saigon</i>	1	132·0 mm.	126 mm.
<i>Formosa</i>	14	131·9 mm. (127-135)	121·0 mm. (107-125).

From the above it is evident that there are three forms which are sufficiently well differentiated by size alone, *i.e.* a northern form, a southern form, and the very big Formosan one to which the single bird from Cochin China appears to be very closely allied.

(1) *Chaptia aenea aenea*.

Dicrurus aeneus Vieill. *Nouv. Dict. d'Hist. Nat.*, nouv. éd., ix. p. 586 (1817).

Type Locality: Bengal.

The type of *aenea* is a bird with a wing of 121 mm., *i.e.* nearer the Northern than the Southern Bengal bird, and the long tail of 121 mm. confirms this diagnosis. We may assume therefore that the type came from Northern Bengal, and accordingly fix the type locality as Dacca in Eastern Bengal, whence all the birds are typically the big northern form.

Habitat. The typical form extends from Mussoorie in the west, through Nepal, Sikkim, Bhutan, Assam and N.E. Bengal, Manipur, Chin and Kachin Hills, and Yunnan to Hainan.

Average measurements (112 birds): wing, 123.2 mm.; tail, 119.0 mm.

(2) *Chaptia aenea malayensis*.

Chaptia malayensis A. Hay, Blyth, *J.A.S.B.* xv. p. 294. 1846.

Type Locality: Malacca.

I can trace no difference whatsoever sufficient to enable one to separate the South Indian from the South Burmese and Malayan birds. The difference in wing average is less than 1.4 mm. and the tail average exactly 2 mm.

Habitat. The range therefore of the form is the whole of India south of the foot-hills of the Himalayas as far as Western Bengal, thence south of Eastern Bengal and Dacca to the Sunderbands, Chittagong, and the whole of Central and Southern Burma, Siam, and the Malay Peninsula.

Average measurements of 64 birds: wing, 118.4 mm.; tail, 111.2 mm.

(3) *Chaptia aenea brauniana*.

Chaptia brauniana Swinhoe, *Ibis*, 1863. p. 269.

Type Locality: Formosa.

The large size of the Formosan birds separates them at a glance from all others except the single Saigon bird already referred to.

Habitat. Formosa; more birds are required from Cochin China before it is possible to say to what form the birds belong which are found there. With the *Dicruridae* the variations in individual size of birds from the same locality are so great that it is, as a rule, unsafe to attempt to diagnose subspecies on anything under a dozen or so specimens, especially when the differences consist of size alone.

Average measurements of 14 birds: wing, 131.9 mm.; tail, 121 mm.